JSC/EC5 Spacesuit Knowledge Capture (KC) Series Synopsis

All KC events will be approved for public using NASA Form 1676.

This synopsis provides information about the Knowledge Capture event below.

Topic: Phobos: Simulation-Driven Design for Exploration

Date: November 10, 2015   **Time:** 1:00 p.m. – 2 p.m.   **Location:** Bld. 9 NW, Rm 2170

DAA 1676 Form #: 34904

This is a links to all lecture material \\js-ea-fs-01\pd01\EC\Knowledge-Capture\FY16 Knowledge Capture\20151110 Crues_Phobos Simulation_Driven Design\Video for 1676 Review

Assessment of Export Control Applicability:

This video has been reviewed by the EC5 Spacesuit Knowledge Capture Manager in collaboration with the author and is assessed to not contain any technical content that is export controlled. It is requested to be publicly released to the JSC Engineering Academy, as well as to STI for distribution through NTRS or NA&SD (public or non-public) and YouTube viewing.

* This file is also attached to this 1676 and will be used for distribution.

Video for 1676 review_Synopsis_Crues_Phobos_11-10-2015.docx

Presenter: Edwin "Zack" Crues

Synopsis: Dr. Edwin "Zack" Crues presented an overview of the current use of modeling and simulation technologies by the NASA Exploration Systems Simulations (NExSyS) team in investigating the spacecraft and missions for the human exploration of Mars' moon Phobos.

   Biography: Dr. Edwin "Zack" Crues has over 25 years of professional experience in developing spacecraft simulation and simulation technologies. Dr. Crues is currently a member of the Simulation and Graphics branch at NASA's Johnson Space Center in Houston, Texas where he leads the development of simulation technologies and the application of those technologies in the simulation of NASA's current and proposed crewed spacecraft. He has developed hundreds of models and simulations for NASA spacecraft including Shuttle, International Space Station (ISS), Orion, Altair, Morpheus, and the Multi-Mission Space Exploration Vehicle. Dr. Crues' recent research focus has been developing and applying distributed computation and distributed simulation technologies. This includes a large-scale distributed simulation of NASA's proposed human space exploration missions. Dr. Crues also has international experience in developing simulations of European Space Agency launch systems and Japanese Aerospace Exploration Agency spacecraft.

   Dr. Crues is also involved in the advancement of modeling and simulation education. He has served on a number industrial advisory boards for university aerospace programs. He is a co-founder of an interoperable simulation competition sponsored by the Society for Modeling and Simulation International. Dr. Crues has taught commercial and university courses in object oriented programming, modeling and simulation. He earned his bachelor's degree, master's degree, and doctorate in aerospace engineering from the University of Texas at Austin.

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